PHENIX

Technical Support 2007

PHENIX
WEEKLY PLANNING

5/24/2007

Don Lynch

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Schedule

RPC Factory Safety Review	5/18/07
ISO 14001 Audit	5/21-25/07
Next Maintenance Day	6/6/07
MuTr FEE chip capacitor rmvl	6/6/07
End of Run Party	6/29/07
Start Shutdown 2007	7/2/07
Remove HBD East	7/19/07
MPC South remove for upgrade	7/20/07
[this space available]	x/xx/xx

Yesterday's Maintenance Day: May 23 2007

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- HyTec VTX vibration tests
  - 2 locations tested, NW & SW lower HBD mtg bracket
  - 3 tests NW with & w/o magnets on, SW w/o magnets
  - ~90 hz largest resonance spike, but still small
  - No detectable change with magnets on
- PC3-E FEM repair
- PbSc mainframe swap
- BBC daughter card repairs
- Ts5 ts server
- HBD capacitor decapitation test

Next 2 Maintenance Days: May 23, June 6 2007

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June 6?:

MuTr Capacitor De-Capitations?
HBD resistor adjustments?

June 20?: No plans yet

Get requests in early, especially if work permit required

RPC Factory

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roll-up door

looking towards storage & assembly areas

services on this wall

looking towards tent area

CMS Factory is similar to our Tent Layout

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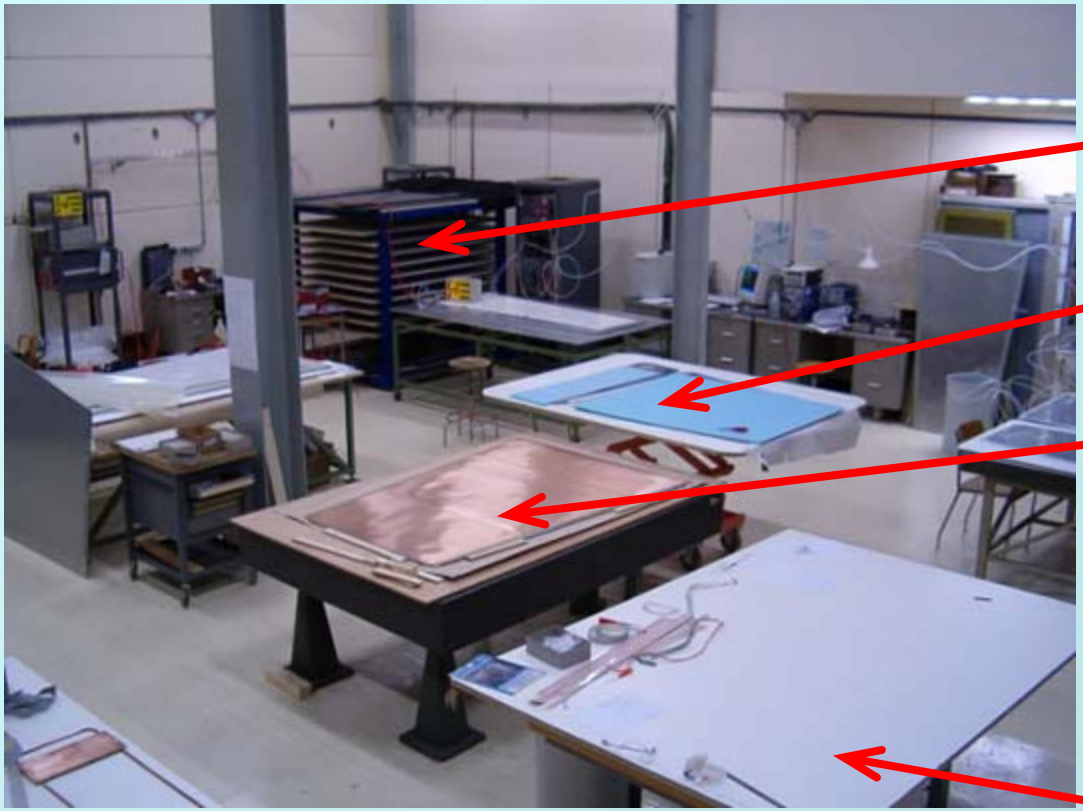
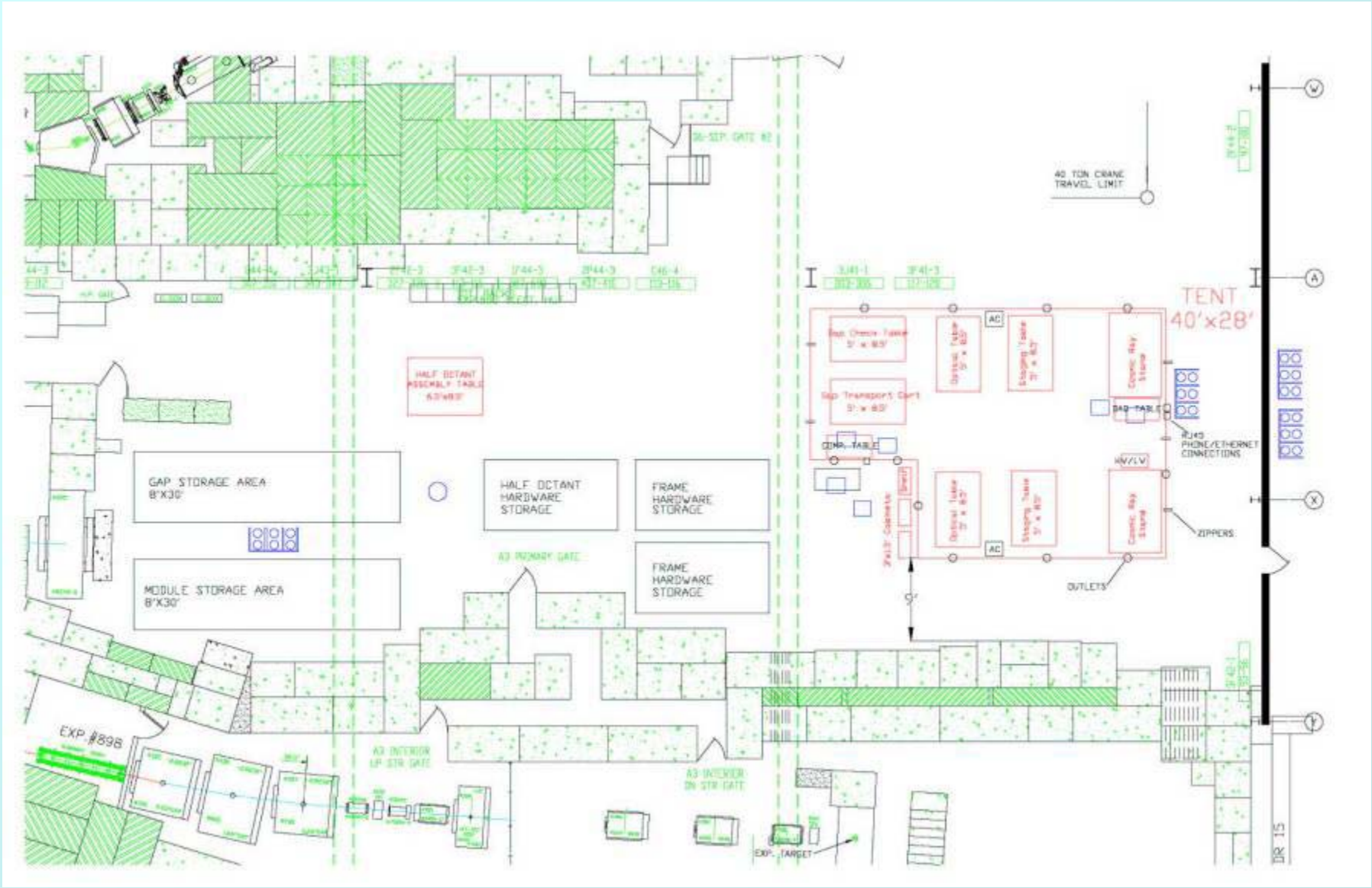


RPC Assembly "Factory" at BNL



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Tent Layout

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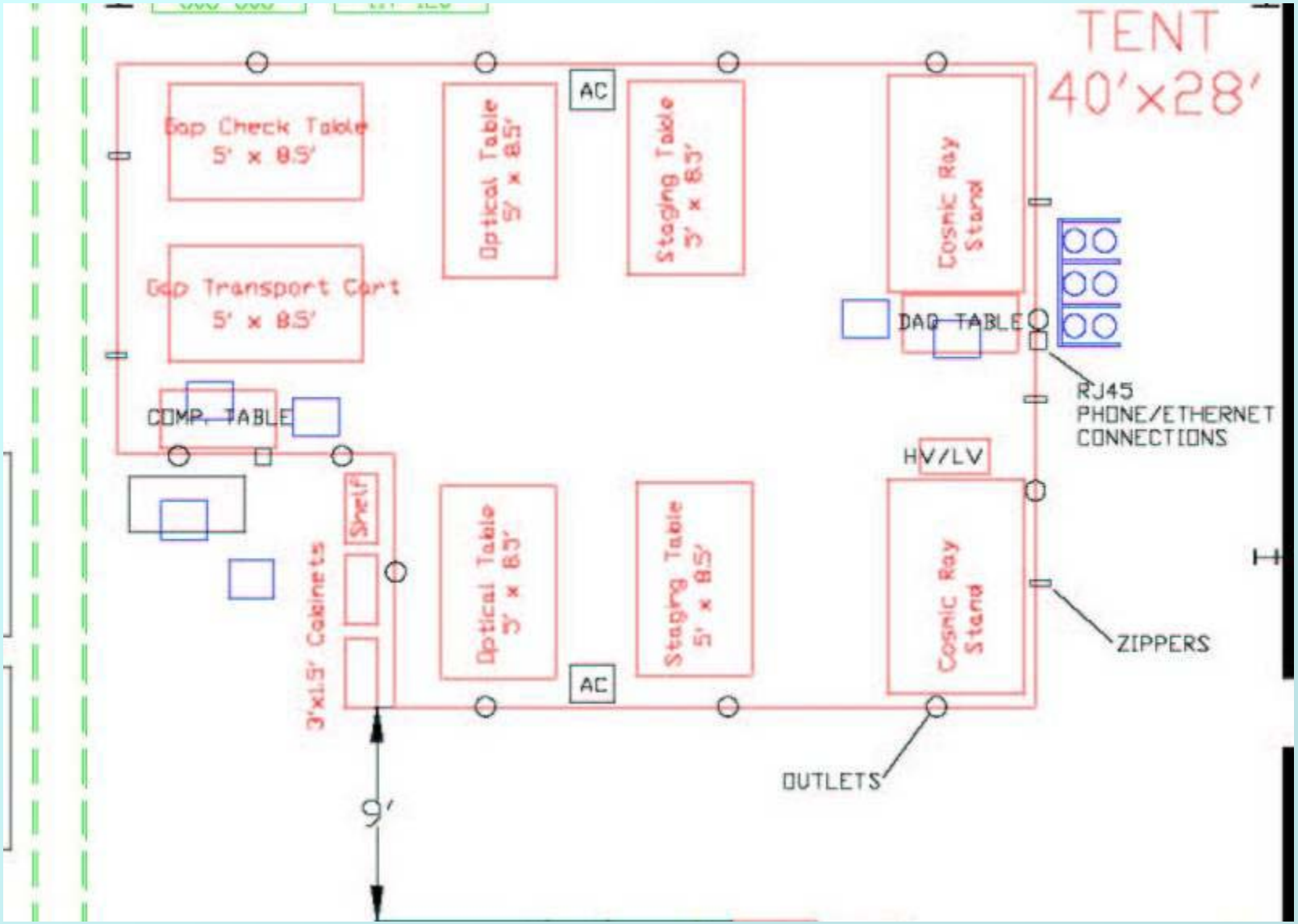

Equipment

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Tent (Gap Testing, Module Assembly, Cosmic Ray Test), (existing from PHENIX PC w/ sealed lights and HEPA filters)

- 2 ~9000 btu/hr AC's (portable or window type)
- 1 Gap Check Table ~5' x 8.5'
- 2 Staging Tables ~5' x 8.5'
- 2 optical Tables ~5' x 8.5' for module assembly
- HV/LV Crate & Electronics
- DAQ Table ~3.5' x 5' holds DAQ Computer, CAMMAC & NIM Crate
- 2 Cosmic Ray Test stands ~6' x 9'
- 1 Computer Desk for data analysis computer ~3' x4'
- 2 Phone/ethernet connections for DAQ and computer desks
- 12 110V duplex outlets on 4-6 20 amp circuits (4-15 amp, 2-20 amp?)
- 1 Rolling transport table ~5'x8' to move gaps & modules in tent & to storage
- ~ 4 chairs, 2 for each desk
- Book shelf

Equipment

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- **Outside of Tent**
  - Storage racks for gaps, modules, raw materials & fabricated frame details
  - Interior racks for test gases (near tent 2 R-134A, 1 SF6, 1 isopropane)
  - Half octant assembly table
  - ½ ton-1 ton jib crane/A-Frame hoist for half octant ass'y area
  - Tech area:
    - Desk & chairs
    - Hardware & tool cabinets (lockable)
    - Phone & internet (shared with tent computer)
    - Book shelf
    - File cabinet (lockable)
- Outside of Building 912
  - Storage racks for spare and empy gas bottles
  - Area for N2 buggy
- Utilities
  - Electric, phone and internet
  - N2 gas lines from buggy to gap & module storage areas

Equipment (Not in Layout)

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- Security & Safety
  - Barriers (To Be Defined)
  - SF6/R134A detector
- Housekeeping & Misc.
  - Trash cans (2)
  - Water (Drinking)
  - Vacuum
  - Printer
  - Webcam (2?)
  - Weather station?
  - Portable ladder
  - Hand tools, portable electronic tools, etc.

Safety: ISO 14001 Registration Audit

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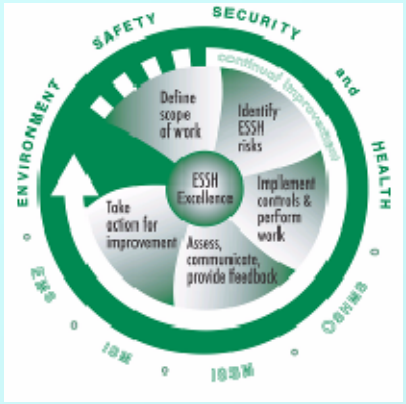

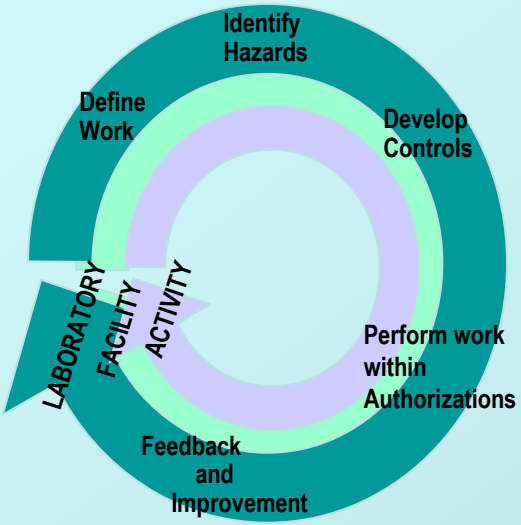

ISO 14001 Registration Audit
This week… could still come to PHENIX

Anyone on site may be interviewed by the reviewers including PHENIX visitors on BNL site.

1. BNL has an ESSH policy (If you really want to be clever, know that ESSH is Environment, Safety, security and Health.).

2. Everyone is personally responsible for safety at BNL.

Procedures Review

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Nothing New to report this week. Efforts will be continued this week

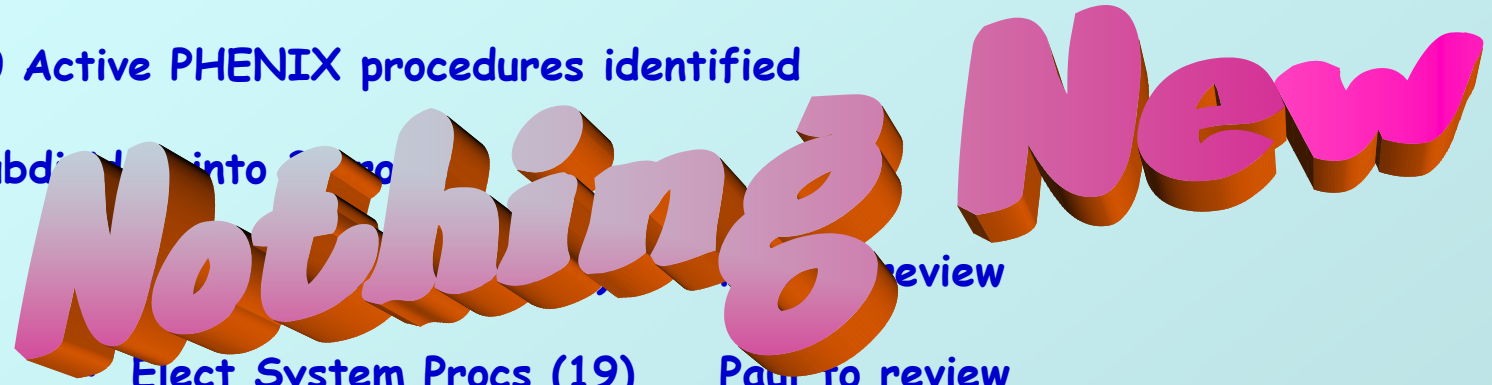
50 Active PHENIX procedures identified

Subdi[illegible]into [illegible]ro

[illegible]eview

- Elect System Procs (19) Paul to review
- Mech System Procs (13) Don to review

Determine if OK as is, needs rev./combine → system expert input



JTA Review

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All training records gathered for PHENIX technical staff techs and engineers.

Cannot change JTA's yet because of inconsistencies in [illegible]'s and

Equivalencies.

Visual Basic/Excel pro[illegible] to [illegible]te individual records

This effort c[illegible]

2007 Summer Shutdown Schedule

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Item	Start	Complete
RPC Factory set up	5/15	2011?
HBD West repair	4/26	9/14
End of Run 7	6/29	6/29
EOR Party	6/29	6/29
Flammable Gas Purge	6/29	7/2
Open Rolling Wall and Disassemble	7/2	7/9
MuID collar removal, MMS move S.	7/9	7/9
Disconnect EC and Move to AH	7/10	7/16
RPC Engineers coordination visit	7/16	7/26
Reconnect EC for maintenance in AH	7/16	7/23
Move MuID collar to AH	7/16	7/16
Install IR floor plates, rolling cart & move manlift to IR	7/17	7/18
Install CM access ladder	7/18	7/18
Remove HBD East	7/19	7/19
Remove MPC South	7/20	7/20
MPC South upgrade/ bench tests	7/23	8/13
Move CM south	7/23	7/23
Remove SouthEast Vertical Lampshade	7/24	7/24
Remove MPC North	7/25	7/30
MPC North upgrade/bench tests	7/30	8/6

2007 Summer Shutdown Schedule (cont'd)

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Item	Start	Complete
MuTr Capacitor Decapitation	7/25	8/31
Reinstall MPC North	8/6	8/13
Move CM North	8/13	8/13
Reinstall MPC South	8/13	8/20
Repair RXNP Phototube	8/13	8/20
Install CM Crane	8/20	9/3
Misc. Subsystem Maint./repair/Upgrade	7/16	10/1
Misc. Infrastructure Improvements	7/16	10/1
MuTr FEE Prototype (Sta. 2N lwr oct.)	9/3	9/28
HBD West Mechanical/Gas Reinstall	9/17	9/24
HBD EAST Mechanical/Gas Reinstall	9/24	10/1
HBD Electrical Reinstall	9/17	10/8
EC Roll In	10/8	10/10
DC East repair	10/11	10/12
HBD/MPC/Other TBD Commissioning	10/1	10/31
Start of Run 8	11/1	11/1

5 Year Plan

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2007	HBD Repairs, DC (minor) repairs), MPC N&S upgrade,MuTr FEE upgrade prototype, infrastructure upgrades & repairs, misc. subsystem work
2008	MuTr FEE upgrades 1 octant 1&2 S, Cu absorber test, RPC3 S, infrastructure upgrades & repairs, misc. subsystem work
2009	Scaffolding in MMS and MMN, MuTr FEE N&S stn. 2 & 3, MuTr N&S stn. 2 & 3 repairs, RPC2 S&N, RPC3 N, Cu absorbers, infrastructure upgrades & repairs, misc. subsystem work
2010	Remove HBD & RXNP, remove beampipe, DC West upgrade, VTX barrel, RPC1 N&S, MuTr FEE stn. 1 N&S, MuTr stn. 1 N&S repairs, infrastructure upgrades & repairs, misc. subsystem work
2011	NCC S, FVTX, infrastructure upgrades & repairs, misc. subsystem work
2012	NCC N, upgrades contingency & wishlist, infrastructure upgrades & repairs, misc. subsystem work

** Years refer to the shutdown year and follow the run with the similar number (i.e. work in 2007 is to be done in the shutdown that follows run 7, and so on)*

Other Work

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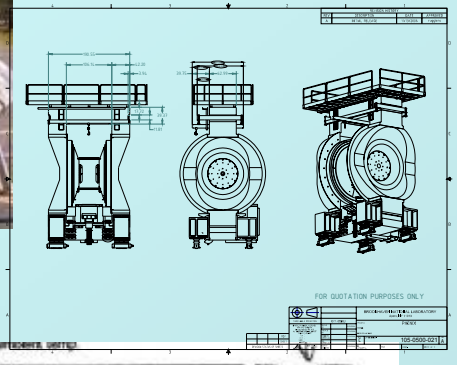
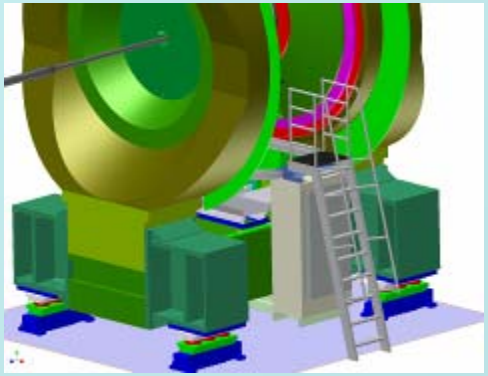
- Empty and discard old container
- VTX chiller test
- New Crane
- Stairway to HBD
- NCC Electronics
- CM Extension Step





Low-Temperature Circulating and Open-Loop Process Chillers

For extra-cool applications, these compact and efficient chillers offer temperature control from 30° to 100° F. They cool water or water mixed with a maximum of 30% inhibited ethylene or propylene glycol. Ideal for applications where a fan cannot be used to cool, such as lasers. All have an air-cooled condenser and a low-pressure safety control (unless noted). Choose from closed-circulating and open-loop types. Connections are NPT female. For indoor use only. All have screw terminals for hardwiring, unless noted. Chillers rated 3,000 to 12,000 Btu/Hr. contain 134A refrigerant; all others contain R-22 refrigerant.

Circulating liquid chillers have an internal tank (except for the 3,000 Btu/Hr. model), which has an external tank on the back) and are for closed-loop cooling of liquids in process equipment. Chillers rated 19,000 Btu/Hr. and up have a relief valve that ensures pump will not "dead head" if flow is restricted (in other words, the pump will continue to pump). *Open-loop liquid chillers* are perfect for cooling liquids in a process bath, coolant spray system, or an external tank. Furnished without a tank.

Btu/ Hr.♣	VAC (Phase)	Amps	Compressor hp	Pump Cap., gpm @ psi	Pipe Size	Overall Size, Ht.×Wd.×Dp.	Tank Size, gal.	Circulating Liquid Chillers Each	Open-Loop Liquid Chillers Each
3,000	115 (1)	6.4	¼	2 @ 8	½"	13"×14"×17"	½	3538K65▲ $2208.12	
6,000	115 (1)	12.5	½	2 @ 8	½"	28"×15"×17"	2	3538K66 (627.81)	3504SK56♥ $2541.03
9,000	115 (1)	17	¾	3 @ 10	¾"	30"×18"×25"	5	3538K67 3196.74	3504SK57 3164.11
12,000	230 (1)	10	1	3 @ 10	¾"	30"×18"×25"	5	3538K68 3638.39	3504SK58 3606.85
19,000	230 (3)	13	1½	8 @ 25	¾"	41"×28"×28"	10	3538K75 5729.46	3504SK81 5865.99
41,000	230 (3)	16	3	12 @ 40	¾"	41"×28"×28"	10	3538K77 6840.87	

♣ Rated at 68° F liquid temperature, 80° F ambient temp. ▲ Includes 10-ft. power cord with standard three-prong plug. No low-pressure safety control. Can be used in circulating and open-loop applications. ♥ Pump capacity is 3 gpm @ 10 psi.

6,000-12,000 Btu/Hr.

Precision Circulating Process Chillers

Using refrigerant and internal heaters, these chillers maintain an accurate and precise temperature between 14° and

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Where To Find PHENIX Technical Info

Memorial Day Holiday

Next Monday

Remember to Remember

Links for the weekly planning meeting slides, long term planning, pictures, videos and other technical info can be found on the web site:

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm